



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/580,392

05/22/2006

Klaus J. Wannowius

31113/42025

1957

4743

7590

01/07/2009

MARSHALL, GERSTEIN & BORUN LLP
233 S. WACKER DRIVE, SUITE 6300
SEARS TOWER
CHICAGO, IL 60606

EXAMINER

KARPINSKI, LUKE E

ART UNIT

PAPER NUMBER

1616

MAIL DATE

DELIVERY MODE

01/07/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/580,392	Applicant(s) WANNOWIUS ET AL.	
	Examiner LUKE E. KARPINSKI	Art Unit 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 11-144 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 11-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims

Claims 2-10 and 15-24 are canceled.

Claims 1 and 11-14 are currently pending and under consideration in this action.

Rejections

Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

New Rejections

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

Art Unit: 1616

1. Applicant Claims
2. Determining the scope and contents of the prior art.
3. Ascertaining the differences between the prior art and the claims at issue, and resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 1 and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over International Publication No. WO/2000/48940 to Hans Schmitt. The translation of WO/2000/48940 will be referenced in this action.

Applicant Claims

Applicant claims a method for the preparation of aqueous solutions of reactive chlorine compounds comprising, reacting chlorine dioxide with hydrogen peroxide at a pH of 6.5 or greater, lowering the pH to 3-6 by adding acid, expelling the gaseous chlorine with a cooled gas and collecting the dissolved chlorine in a basic solution with a

Art Unit: 1616

pH of 10 or greater, and incubating the dissolved chlorine with excess chlorite at a pH of 6-8.

Applicant further claims different methods of collecting the gaseous chlorine, different alkaline solutions, and stabilizing said solutions by increasing the pH value.

Determination of the Scope and Content of the Prior Art

(MPEP §2141.01)

Schmitt teaches methods for producing reactive chlorine compounds (title) comprising reacting chlorine dioxide with hydrogen peroxide at a pH value of greater than or equal to 6.5, lowering the pH value to below 6, and expelling the free chlorine compound with an inert gas (page 20), the utilization of chlorites (page 18-19), and that said solutions should be stored at a pH of 10 or higher (page 19), as pertaining to claim 1.

Schmitt further teaches collecting the free chlorine in a cold trap and in an aqueous alkaline solution (page 19) as claimed in claims 11 and 12, said alkaline solution comprising an alkaline metal base (page 19), as claimed in claim 13, and stabilizing said solutions by increasing the pH (pages 19 and 21), as claimed in claim 14.

Ascertainment of the differences between the prior art and the claims

(MPEP 2141.01)

Art Unit: 1616

Schmitt does not teach that the dissolved chlorine solutions are collected in a solution with a pH of above 10, however, Schmitt does teach that said solutions should be stored in basic solutions to improve stability.

Schmitt also does not teach incubation with up to 100 fold excess of chlorite at a pH of 6-8, however, Schmitt does teach that said methods can be performed in the presence of chlorite in order to 'push' the reaction to completion.

Although Schmitt does not explicitly disclose an example wherein all of the claimed steps are preformed, Schmitt does teach that all of said steps may be performed or a reason for why one would perform such a step.

Finding of prima facie Obviousness Rational and Motivation
(MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to collect the dissolved chlorine solution in a basic solution with a pH above 10 in order to improve the stability of said chlorine compounds. One would have been motivated to collect the dissolved chlorines in such a manner to improve the stability.

Regarding the 100-fold excess chlorite, Schmitt teach the utilization of chlorite to push the production of said chlorine compounds and one of ordinary skill in the art would have readily seen that the more chlorite is utilized the farther said reaction will go to completion. It would have been obvious to utilize 100-fold excess chlorite in order to push said reaction and the pH of said chlorite composition would necessarily be

Art Unit: 1616

between 6 and 8. It is also well known that heat pushes reaction to completion, therefore incubation would have also been obvious.

In a prior art reference it is not necessary for all of the possible compositions to be exemplified in order for the art to render an invention obvious.

From the teachings of the reference, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Conclusion

Claims 2-10 and 15-24 are canceled.

Claims 1 and 11-14 are rejected.

No claims are allowed.

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUKE E. KARPINSKI whose telephone number is (571)270-3501. The examiner can normally be reached on Monday Friday 9-5 est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on 571-272-0646. The fax phone

Art Unit: 1616

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LEK

/Mina Haghighatian/
Primary Examiner, Art Unit 1616